

DISTRIBUTION AND BIOLOGY OF THE TENEBRIONID
ULUS MARITIMUS CASEY IN FLORIDA

CHARLES A. TRIPLEHORN AND BARRY D. VALENTINE

Departments of Entomology and Zoology respectively,
The Ohio State University, Columbus, OH 43210

Ulus maritimus Casey was described in 1890. Casey mentions (p. 414) that the species is "... peculiar to the sand dunes which line the ocean beaches ..." and that he took it "... in considerable abundance at Galveston [Texas]". T. J. Spilman (Systematic Entomology Laboratory, USDA) informs us (*in litt.*) that the Casey collection (USNM) contains six specimens from Galveston and one from Florida. The latter has a partial label "dar Key Fl." which he interprets as Cedar Key, Levy County, Florida. The National Museum of Natural History (Spilman, *in litt.*) has additional specimens identified as *Ulus maritimus* from the following Texas localities: Laredo (Webb Co.), Carrizo Springs (Summit Co.), Goliad (Goliad Co.), Corpus Christi (Nueces Co.), and Galveston (Galveston Co.). Only the last two localities have marine sand dune habitats. Since the determinations were not confirmed by us, and *Ulus elongatulus* Casey is common in the lower Rio Grande Valley of Texas, some of the above records may prove to be that species. The Ohio State University collection has ten specimens of *U. maritimus* from Mobile, Alabama, collected by H. P. Löding. The species was listed by Löding (1945, p. 89) from both Mobile and Baldwin Counties, Alabama with the notation "Bay shore. Under logs."

A series of twelve specimens of *U. maritimus* was taken 23 March, 1978 on the north end of Gasparilla Island, Charlotte Co., Florida; four specimens were taken 10 miles east of Destin, in Walton Co., Florida on 21 March, 1973, both lots by B. D. Valentine and family; all were on beach sand dunes at night. Except for the unique in the Casey collection and one from St. Andrews State Park (Bay County) in the Florida State collection of Arthropods, these are the only known specimens from Florida. The series from Gasparilla Island was collected at night with headlamps, at the base of low beach dunes facing the Gulf of Mexico. Vegetation was early dune succession, mostly *Uniola paniculata* (sea oats), with a variety of other halophilous and xerophilous plants. The beetles were partly exposed in the loose white sand, usually immersed up to or just over the prothoracic and elytral margins, with the legs invisible in the sand. When motionless they resembled partly buried plant seeds; when active, the leg movements were invisible and the beetle appeared to swim along the sand surface with no visible means of propulsion. The 1973 collection near Destin in western Florida was made in loose white sand on the landward side of the dunes nearest the Gulf. There was no vegetation except some sea oats on the dune top; the beetles were at the dune base. Their behavior was not observed in detail, but sand-swimming was noted. At Gasparilla Island the only associated arthropod was a pale lycosid spider; at the Destin site, *Ulus* occurred with three other tenebrionids: *Blapstinus metallicus* (Fabricus), *Polypleurus geminatus* Solier, and *Pseudephalus brevicornis* Casey.

It is reasonable to suppose that *U. maritimus* occurs along the Gulf Coast wherever suitable habitat exists. Collecting along dunes at night or pit-fall trapping would probably yield specimens from many places where the species is as yet unknown. Both techniques were successful for *Ulus fimbriatus* Casey, at Monahans, Texas, where 18 specimens were collected on 16 July, 1972 by C. A., W. E., and B. W. Triplehorn; no specimens were collected during daylight hours despite vigorous conventional searching.

LITERATURE CITED

- CASEY, T. L. 1890. Coleopterological Notices. II. Ann. New York Acad. Sci. 5:307-504, pl. IV.
LÖDING, H. P. 1945. Catalogue of the beetles of Alabama. Geol. Survey Alabama Monograph 11:1-172.